

REMARKS

This Amendment is submitted in response to the final Office Action of February 22, 2008. Claims 1–56 are pending. Claims 1, 13, 25, 34, and 43 are amended, claims 50–56 are cancelled, and Claim 57–59 are added by this response. No new matter is submitted, and support can be found at least in Figs. 3–5 and paragraphs [0066] – [00122]. A Request for Continued Examination and an Interview Summary are submitted herewith.

I Interview of May 13, 2008

Applicants thank Examiner Weidner for granting an in-person interview on May 13, 2008. An Interview Summary stating the substance of the interview is submitted herewith. Though agreement was not reached, it did seem likely that the amendments made in this application would overcome the art of record.

II Rejections Under 35 U.S.C. §112

The Office Action rejected Claims 55 and 56 under 35 U.S.C. §112, second paragraph, as being indefinite. Claims 55 and 56 are cancelled. Therefore, the rejection is moot.

III Rejections Under 35 U.S.C. §102

The Office Action rejected Claims 1–5, 7, 11–12, 25–26, 28, 32–35, 37, 41–45, 49–52 and 54 under 35 U.S.C. §102(b) as being anticipated by U.S. Patent Application Publication No. 2003/0037331 ("Lee"). Applicant respectfully disagrees.

Lee does not disclose or suggest the present claims for several reasons, which will be discussed with respect to independent claims 1, 13, 25, 34, and 43. Each of the independent claims makes it clear that it receives both a unicast and multicast transmission of the same content (e.g., a series of frames in each transmission) that is the same content that is concurrently transmitting. This means that both the unicast and multicast streams are from the same show, that occurs at the same time on the

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same channel, and include the same content. The present claims further point out that the unicast stream is utilized first, then at the appropriate time, the system switches to the multicast stream.

Lee does not teach claims 1, 13, 25, 34, and 43. Lee discloses a video on demand (VOD) system in which if a user requests a show and a pre-scheduled starting time is not sufficiently near to the current time, the user receives a front end of the show and the system immediately begins buffering the back end of the show. The user views the front end and when the user is done viewing the front end it is spliced to the buffered back end. In this manner, the user views the entire show.

See figures 4A-4C for example. In Lee, if a user arrives at a certain time they are admitted dynamically. (See, Lee at paragraph 0047). Being admitted dynamically means the next static starting point for the VOD is too far away from the current time. If this is the case, then Lee provides the user with "at least a part e.g., the front part" of the video. (See, Lee at paragraph 0048). The user is eventually merged to receive "the remainder part" of the video once the front end is watched (See, Lee at paragraph 0048).

Figure 4B of Lee explains this process. If the user is admitted dynamically they immediately begin saving the remainder part of the show to a buffer by "receiving and caching the most-recently started multicast. . ." (See, Lee at paragraph 0049). However, as Lee points out, the user "has already missed the beginning of the video." (See, Lee at paragraph 0049). As such, Lee dynamically provides the front end (i.e., the missed portion) of the video "until that transmission reaches the point in the video . . . at which caching had started." (See, Lee at paragraph 0050).

Figure 4C shows a timing chart for admission and preferred transmission for n dynamically admitted users. Although the Examiner has cited Figure 4C due to the fact that content "D1" appears in multiple places in the Figure, Applicant asserts that Figure 4C is fundamentally inapplicable to the present claims. For example, each listing of the

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content "D1" in Figure 4C is for a different dynamically admitted user (i.e., users 1 through n). Thus, although it is possible to send the same content to multiple users, Figure 4C does not read on any of the present claims because the present claims deal with a single "channel change" which is applicable to a single event with respect to a single user and not multiple users as shown in Figure 4C.

From Figures 4A-4C, it is clear that although Lee deals with a single video, there is no overlap of frames between the front end and the back end, as it would serve no purpose. More specifically, the "front end" in Lee and the "remainder part" are not the same content that is concurrently transmitting because they include content from completely different and disjoint parts of a show.

Therefore, Lee merely splices together two different portions of the same show which is not a concurrent transmission of the same content. In contrast, the present claims receive both unicast and multicast transmissions of the same portions of the show and switches to multicast at a random access point in order to take advantage of unicast's latency capabilities, for a short duration, right after a channel change. This results in a better user experience due to a faster channel change. For at least the above reasons, it is respectfully submitted that Claims 1, 13, 25, 34, and 43 and their respective dependent claims are patentably distinguished from Lee and are in condition for allowance.

IV Rejections Under 35 U.S.C. §103

The Office Action rejected Claims 6, 27 and 36 under 35 U.S.C. §103(a) as being unpatentable over Lee in view of U.S. Patent Application Publication No. 2002/0024956 ("Keller-Tuberg"). The Office Action rejected Claims 8-9, 13-18, 20-24, 29-30, 38-39, 46-47 and 53 under 35 U.S.C. §103(a) as being unpatentable over Lee in view of U.S. Patent No. 6,637,031 ("Chou"). The Office Action rejected Claims 10, 31, 40 and 48 under 35 U.S.C. §103(a) as being unpatentable over Lee in view of the background of

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the present application. The Office Action rejected Claim 19 under 35 U.S.C. §103(a) as being unpatentable over Lee in view of Chou in further view of Keller-Tuberg. Applicant respectfully disagrees.

A prima facie case of obviousness requires the combination of the references to teach all of the elements of the claims. For at least the following reasons, none of the cited references teach a unicast and a multicast transmission of the same content that is being concurrently transmitted.

For example, Keller-Tuberg discloses enabling bi-directional communication in a multicast IP network using ATM transport, enabling a user to control multi-cast services such as VOD. If a final end user volunteers disconnection from a multicast IP flow, the multicast router may stop streaming the IP multicast information packets toward the user's access node. If the user later requests to receive the multicast information again, the multicast stream can be resumed and the user's access node can be instructed to join the multicast.

However, it is respectfully submitted that Keller-Tuberg does not compensate for the deficiencies of Lee because Keller-Tuberg is directed to IP multicast networks only. As such, Keller-Tuberg has no teaching, suggestion, or motivation applicable to unicast transmissions. For that reason, Keller-Tuberg cannot be used to render any of the claims obvious because each of the independent claims and the claims which depend from them include both unicast and multicast transmissions of the same concurrently transmitting content.

Chou does not render any of the current claims obvious either. For example, Chou discloses transmitting two streams of video data having different quality levels. As a result, a lower quality stream can be received and displayed quickly, and a higher quality stream can be received and displayed once a display buffer is sufficiently full.

However, it is respectfully submitted that Chou does not compensate for the deficiencies of Lee because Chou's first, low-quality data stream is transmitted faster than real time, at a bit rate equal to the transmission bit rate. "The client receives the low resolution stream faster than real time, but decodes and presents the low resolution stream in real time." (See, Chou at Summary of the Invention). Thus the initial buffer fills faster than the data is played out. Eventually, the buffer fills up enough to send the second normal quality data stream and there is no delay for the user.

Thus, Chou suffers from a similar deficiency as Lee, which is that one stream is a front end of a show and another is the back end. Thus, Chou lacks any teaching, suggestion, or motivation applicable to unicasting and multicasting the same content that is concurrently transmitting. For that reason, Chou cannot be used to render any of the claims obvious because each of the independent claims and the claims which depend from them include both unicast and multicast transmissions of the same concurrently transmitting content.

V New Claims

It is respectfully submitted that none of the cited art, alone or in combination, disclose or suggest new claims 57-59. New claim 57 in particular covers an embodiment where the unicast stream and the multicast stream do not cover the same content. New claim 57 is also not anticipated by Lee because it receives the multicast stream, after the last frame of the unicast media-stream. Lee, on the other hand, immediately begins buffering the back end of the show (e.g., multicast) before it receives the front end (e.g., the unicast). In addition, no new matter is added. A notice of allowance for new claims 57-59 is respectfully requested.

VI M.P.E.P. §707.07(j)

M.P.E.P. §707.07(j) states:

"...If the examiner is satisfied after the search has been completed that patentable subject matter has been disclosed and the record indicates that the applicant intends to claim such subject matter, the examiner may note in the Office action that certain aspects or features of the patentable invention have not been claimed and that if properly claimed such claims may be given favorable consideration..."

Applicants respectfully request that the Examiner make Applicants aware of any subject matter disclosed by the present application which the Examiner believes is patentable. By doing so, the Examiner would help expedite prosecution by enabling Applicants to amend the present claims or draft new claims directed to such subject matter.

CONCLUSION

Accordingly, in view of the above amendment and remarks it is submitted that the claims are patentably distinct over the prior art and that all the rejections to the claims have been overcome. Reconsideration and reexamination of the above Application is requested. Based on the foregoing, Applicants respectfully requests that the pending claims be allowed, and that a timely Notice of Allowance be issued in this case. If the Examiner believes, after this amendment, that the application is not in condition for allowance, the Examiner is requested to call the Applicant's attorney at the telephone number listed below.

If this response is not considered timely filed and if a request for an extension of time is otherwise absent, Applicants hereby request any necessary extension of time. If there is a fee occasioned by this response, including an extension fee that is not

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Respectfully submitted,
Microsoft Corporation

Date: May 21, 2008

By: /MacLane C. Key/

MacLane C. Key, Reg. No.: 48,250
Attorney for Applicants
Direct telephone (703) 647-6566
Microsoft Corporation
One Microsoft Way
Redmond WA 98052-6399

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Rimma N. Oks
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